

BRIGHTNESS CONTROL FOR LIQUID CRYSTAL DISPLAYSAbstract of the Disclosure

An arrangement and method for adjusting the brightness of an image signal having digital pixel values to produce brightness adjusted output pixel values is provided with an adder and lower and upper clamp circuits. The adder adds a brightness value to the digital pixel values of the image signal to produce adjusted pixel values and a carry-out signal. The lower clamp circuit clamps the adjusted pixel values to a lowest output pixel value when the carry-out signal and the brightness value indicate that addition of the brightness value to the digital pixel values produces adjusted pixel values below the lowest output pixel value. The upper clamp circuit clamps the adjusted pixel values to a highest output pixel value when the carry-out signal and the brightness value indicate that addition of the brightness value to the digital pixel values produces adjusted pixel values above the highest output pixel value. The brightness adjuster can be used in a motion video architecture data path to compensate for the brightness response of certain displays, such as LCD displays.